## **LISTING OF CLAIMS:**

Please cancel claims 2 and 7. Claims 1, and 3-6 are currently amended.

The following listing of claims replaces all prior versions of claims in the present application.

1. (Currently amended) A method for labeling multi material data, for a sequence of processing steps using a computer, the steps including acquisition of external data-(12), storage of cell data through octree division of the external data, and simulation using the cell data, the method comprising:

an external data acquisition step (S1) of (S1) acquiring the external data (12) composed of boundary data and physical property values of an object (1); an external data input step (A) of (A) inputting the external data (12) into a computer;

a cell division step (B) of (B) dividing the external data into rectangular solid cells (13) having boundary planes orthogonal to each other;

a cell-classification step (C) of (C) classifying each of the divided cells into a boundary cell (13a)-including the boundary data, and a non-boundary cell (13b)-not including the boundary data;

a space classification step (D) of (D) classifying the vertices of each cell into multiple spaces partitioned by the boundary data;

a simulation step (S3) of (S3) performing a simulation using the physical property values for each cell; and

an output step (S4) of (S4) outputting simulation results,

wherein the cell-classification-step (C) comprises the steps of:

further classifying each of the boundary cells (13a)-into a first type cell and a second type cell, the first type cell having a cutting point at which an edge line or vertex is cut by the boundary data, the second type cell having a cutting point that lies on a boundary with another cell of different hierarchy, and the second type cell being larger than the another cell; and

\_\_\_\_\_assigning a material number to each cell vertex, and wherein step (D) further comprises:

(D1) assigning all the non-boundary cells space numbers different for respective spaces partitioned by boundary data; and

(D2) assigning each vertex of the boundary cell the space number of the neighboring non-boundary cell that is not partitioned by the boundary data.

## 2. Cancelled.

- 3. (Currently amended) A method for labeling multi material data according to claim 21, wherein the boundary cell setting step (D2) comprises a step of assigning a vertex matching the boundary data either of the space numbers of two neighboring non-boundary cells.
- 4. (Currently amended) A method for labeling multi material data according to claim 1, wherein the cell division step (B) comprises a step of re-dividing the rectangular solid cells (13) by octree division until a number of cutting points enough to reconstruct boundary shape elements forming the boundary face included in the external data are obtained.
- 5. (Currently amended) A method for labeling multi material data according to claim 1, wherein the division-step (B) comprises a step of dividing voxel data into rectangular solid cells (13) of the same size.
- 6. (Currently amended) A method for labeling multi material data according to claim 21, wherein the non-boundary cell setting step (D1) comprises a step of scanning all the rectangular solid cells (13)-repeatedly in sequence, or in recursive processing, in the three directions of X, Y, and Z.

7. Cancelled.